

TRAUMATIC FIBROMA OF HARD PALATE: A CASE REPORT

Devendra Singhal¹, Ranjana Mohan², Bhavna Jha Kukreja³, Akanksha Singh⁴

Post Graduate Student^{1,4}, Professor & Head², Reader³

^{1,2,3,4}Department of Periodontology, Teerthanker Mahaveer Dental College and Research Centre, Moradabad

Abstract

Traumatic fibroma is a benign exophytic and reactive oral lesion that develops secondary to injury. Fibroma is a result of a chronic repair process that includes granulation tissue and scar formation resulting in a fibrous submucosal mass. Recurrences are rare and may be caused by repetitive trauma at the same site. The lesion does not have a risk for malignancy. Present case reports a traumatic fibroma in a 14 year old female in relation to the upper front of 11 & 21. On the basis of clinical, radiological and histological evaluation diagnosis of traumatic fibroma was made, which was successfully treated by surgical excision without recurrences of lesions during 6 months follow up.

Key words: Benign tumor, Pyogenic granuloma, Reactive hyperplasia, Traumatic fibroma.

Introduction

Most frequently observed overgrowths in oral cavities are local and benign in nature. The etiological factors for these lesions can be attributed to irritants like plaque, calculus, restorations, trauma from occlusion, overhanging margins of crowns & bridges.¹ Different types of localized reactive lesions may occur in the oral cavity, such as focal fibrous hyperplasia, pyogenic granuloma, peripheral giant cell granuloma and peripheral ossifying fibroma. The majorities of the fibromas occurring in the oral cavity are reactive in nature and represent a reactive hyperplasia of fibrous connective tissue in response to local irritation or trauma rather than being a true neoplasm.² Traumatic or irritational fibroma is a common benign exophytic and reactive oral lesion that develops secondary to injury with prevalence of 66% in females.

Fibroma is a result of a chronic repair process that includes granulation tissue and scar formation resulting in a fibrous submucosal mass. Recurrences of traumatic fibroma are rare and may be caused by repetitive trauma at the same site. Mobility and/or migrations of adjacent teeth are occasionally observed. The lesion does not have a risk for malignancy and could be excised surgically. This paper reports such a rare case of traumatic fibroma on the hard palate in the age of 14 years old female patient.⁴⁻⁶

Case Report

A 14 year old female patient reported to the department of Periodontology of Teerthankar Mahaveer College of dentistry and research centre, Moradabad with a complaint of soft tissue growth behind upper front teeth. The growth started as a peanut size which sustained to increase in size from past six months and was interfering with chewing. Clinical examination revealed impinging overbite of 4 mm (Figure 1) which cause white/red colored exophytic growth, oval in shape with a

pedunculated base. It was observed on the palatal region of 11 and 21 as shown in (Figure2).



Figure 1: Deep bite of 4mm



Figure 2: Pre-operative lesion irt 11, 21.

Trauma from occlusion from lower anteriors was treated by coronoplasty. Pathological migration of tooth 21 is also seen with increase of lesion. On palpation tenderness was present and growth was pedunculated with stalk attached at base, it was soft to firm in consistency and did not bleed on palpation and surface was not smooth. On the basis of history and clinical findings, it was provisionally diagnosed as traumatic fibroma. Pyogenic granuloma, Peripheral giant cell granuloma, and neurofibroma were considered under differential diagnosis.

Routine blood investigation was within normal limits. Upon radiological examination 11 & 21, revealed horizontal bone loss, widening of Pdl space around tooth and loss of lamina dura at apical region to cervical 1/3 region of teeth (Figure 3), pulp vitality test of 21, 22, 11, 12 was positive with base line 3 of all teeth.



Figure 3: IOPAR of 11, 21

Under local anesthesia with adrenalin 1:80000, the mass was excised completely with Bard Parker handle no. 3 and 15 no. blade with aggressive curettage of the surrounding tissue with universal curette of Hu friedly no. 2r/2l (Figure 4).



Figure 4: Post operative (immediately)

It was followed by application of coe-pack retained by pre-fabricated customized splint (Figure 5).



Figure 5: Application of coe-pack and placement of splint

The removed mass measured 10mm x 15mm in width and length respectively (Figure 6).



Figure 6: Excised mass 15mm x 10 mm

The tissue was sent for histopathological examination. The H & E stained section under low magnification, 4x: shows epithelium overlying fibro-vascular connective tissue stroma (Figure 7a). Under higher magnification, 40x: the epithelium was para- keratinized stratified squamous type showing few areas of hyperplasia showing degenerative changes of superficial epithelial cells (Figure 7b).

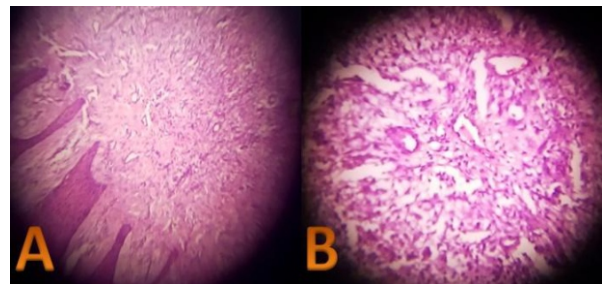


Figure 7: A. Histological finding at low magnification, 4x: and B. High magnification, 40x:

Connective tissue stroma was fibro vascular comprising of numerous budding and proliferating endothelial lined blood capillaries of varying sizes filled with RBC's. Stroma also showed dense bundles of collagen fiber along with fibroblasts and few inflammatory cells infiltrate chiefly consisting of lymphocytes, confirming the diagnosis of traumatic fibroma. Patient reported for follow up examination at 7 days (splint was removed) (Figure 8a) and at 1 months interval (Figure 8b) & 6 months post-operatively.



Figure 8: A. Post-operative after 1 week, and B. After 1 month

Discussion

Traumatic fibroma is most commonly seen in older adults but can occur at any age. It affects 1 - 2% of adults. It is usually due to chronic irritation such as rubbing from a rough tooth, cheek or lip biting, dentures or other dental prostheses.⁴

Hormonal influences may play a role too, as the lesions have shown a female predilection, with increasing occurrence in the second decade of age and declining incidence after the third decade.⁵

According to Barker and Lucas, irritation fibroma is to be differentiated from true fibroma by pattern of collagen arrangement (radiating and circular pattern in irritation fibroma) and has 66% female predilection and can occur at any age, but is usually seen in the 4th to 6th decades of life.⁶ The pedunculated and uncapsulated lesion with pseudo epitheliomatous hyperplasia, chronic inflammatory infiltrate mainly plasma cells in submucosa and typical collagen pattern favours the diagnosis of traumatic or irritation fibroma than true fibroma.⁷ Cooke called all the pedunculated swelling from a mucosal surface as "polyp" (fibro epithelial polyp), where maximum number of lesions occurred on the mucosa in the line of occlusion, and the entire pedunculated and sessile lesion in the gingiva as "epulides" (fibrous epulides), which commonly occurred in the maxillary anterior region.⁸ Fibroma mostly affects the buccal mucosa along plane of occlusion of maxillary and mandibular teeth,⁹

The present case demonstrate traumatic injury which might be the main causative factor. An asymptomatic and pedunculated growth having epithelial hyperplasia and connective tissue stroma with mature collagen fibers and scattered fibroblast and fibrocytes and moderate vascularity favors the diagnosis of traumatic fibroma of palate.

Traumatic fibroma presents as a firm smooth soft tissue growth in the mouth. It is usually the same colour as the rest of the mouth lining but is sometimes paler or, if it has bled, may look a dark colour. The surface may be ulcerated due to trauma, or become rough and scaly. It is usually dome-shaped but may be on a short stalk like a polyp (pedunculated). Common sites include the sides of the hard palate, tongue, gingival area and inside the lower lip.⁴ Apart from the feel and appearance, traumatic fibroma does not cause any symptoms. It develops over weeks or months to reach a maximum size usually about 1cm in diameter, but can sometimes be larger. Traumatic fibroma is usually a solitary lesion. When multiple lesions are seen, associated diagnoses need to be considered including tuberous sclerosis, familial fibromatosis and fibrotic papillary hyperplasia of the palate, which may occur on the hard palates of patients who are chronic mouth-breathers.

Pyogenic granuloma (PG) is another condition which can occur in any sites of oral mucosa. Usual character of PG is bleeding on trauma but longlasting untreated case becomes fibrosed and bleeding may not occur. In fibrotic

PG, residual granulation tissue usually persists, which is in accordance with histological findings of this case report.¹⁰

The diagnosis of traumatic fibroma will be suspected clinically when it presents with the usual history and examination findings. An excisional biopsy may be taken to confirm the diagnosis. Treatment of such lesion involves surgical excision. Prognosis of traumatic fibroma is usually good, recurrence is rare or uncommon; however Cooke in his review reported 3 cases of recurrences out of 78 biopsy specimens.⁸ The recurrence has been attributed to incomplete initial removal, repeated injury and/or the persistence of local irritants. It is therefore important to eliminate the source of the irritation and regular follow-up is required.¹¹

Conclusion

Traumatic fibroma clinically resembles with other lesions named as peripheral giant cell granuloma and pyogenic granuloma. Proper diagnosis is made on the basis of clinical, radiological and finally on histopathological findings. Etiology of traumatic fibroma could be traumatic tooth, overhanging restoration or prosthesis and should be corrected prior to surgical excision of the lesion, which is generally the treatment of choice. Present case was evaluated for 6 months and no recurrence was observed during follow-up period.

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Corresponding author

Dr. Devendra Singhal

P.G. Student

Department of Periodontology

TMDCRC, Moradabad

Email: dev.singhal27@gmail.com

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